

ELECTROMAGNETIC FLOWMETER

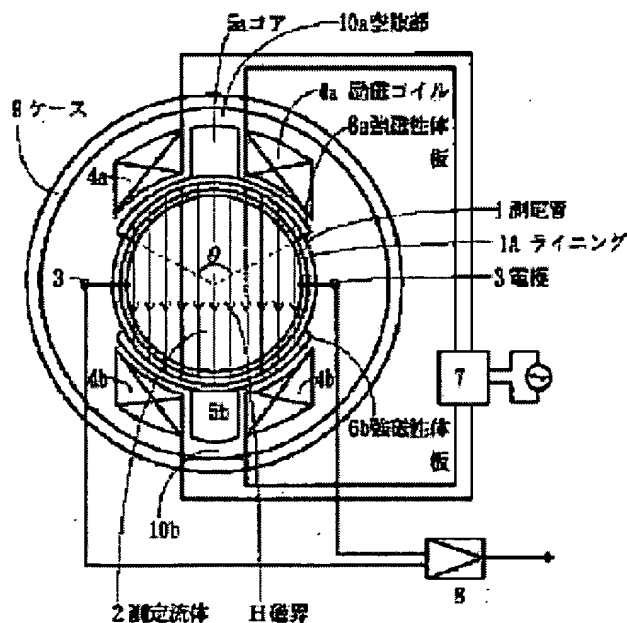
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Abstract of JP7139980

PURPOSE: To reduce measurement error even if the viscosity coefficient of a measurement fluid changes and flow-rate distribution differs by laying out a pair of ferromagnetic body plates curved in circular shape along a measurement pipe between an excitation coil and the measurement pipe.

CONSTITUTION: A measurement fluid 2 flows in a magnetic field H generated by excitation coils 4a and 4b, thus measuring the flow rate from the electromotive force generated between electrodes 3, 3. Ferromagnetic body plates 6a and 6b curved in circular shape along a measurement pipe 1 are laid between the excitation coils 4a and 4b and the measurement pipe 1 while they are in contact with cores 5a and 5b. A magnetic potential is generated between the edge part of the ferromagnetic body plates 6a and 6b and a case 9 by the magnetic resistance based on the space parts 10a and 10b between the cores 5a and 5b and the case 9, thus bypassing one part of the magnetic flux from the edge part of the ferromagnetic body plates 6a and 6b to the case 9, enabling the magnetic field H inside the measurement pipe 1 which is the space part to form a uniform magnetic field in a direction vertical to the measurement pipe 1 and the axis of the electrode 3, and hence obtaining a high measurement accuracy.



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